

REMARKS

Initially, Applicant expresses appreciation to the Examiner for the courtesies extended in the recent in-person interview held with Applicant's representative. The amendments and remarks presented herewith are consistent with the discussions held during that interview. Accordingly, reconsideration of the application is requested in light of the amendments and arguments presented herein and as discussed during the interview.

The Office Action, mailed October 24, 2006, considered and rejected claims 1-5, 7-18, 21-28 and 30-38. Claim 17 was objected to because of a minor informality which has been corrected by this amendment. Claims 1-5, 7-18, 21-28 and 30-38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wong (U.S. Patent No. 6,889,229) in view of Srinivasan (U.S. Publ. No. 2004/0128400).¹

By this paper, claims 1, 2, 5, 7, 8, 10-12, 15, 17, 21-26, 28, 30, 31 and 34-37 are amended, while no claims have been added or cancelled.² Accordingly, following this amendment, claims 1-5, 7-18, 21-28 and 30-38 remain pending, of which claims 1, 10, 17, 21, 25 and 37 are the only independent claims at issue.

As discussed during the interview, Applicant's invention generally relates to extending the use of data-types between different middle-tier servers in a multi-tier server system. As recited in claim 1, for example, a method is disclosed for deploying one or more data types from a back end server of the multi-tier server system to any of a plurality of middle tier servers so as to maintain consistency and compatibility in the definitions of the data types and in the code associated with each data type stored on each of the middle tier servers. As recited, the method can include an act of creating a special table in a database on the back end server, the special table including one or more fields for storing data identifying data types used by the plurality of middle tier servers as well as code for enabling the use of each of the data types. The database of the back end server acts as a repository for each data type used by any of the middle tier servers, such that the back end server acts as a single and centralized source from which each of the

¹ Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

² Support for the claim amendments can be found throughout Applicant's application, including at least the disclosure in paragraphs 9, 24, 26, 40 and 43 of the originally filed application.

middle tier servers obtains all data types used by any other of the plurality of middle tier servers as well as the corresponding code for use of the data types. An extended assembly that corresponds to the data type to be deployed is also obtained which includes data from the special table such as data identifying the data type, one or more definitions, and code for processing the data. The extended assembly is also transmitted to at least one of the middle tier servers.

As discussed during the interview, while the cited art generally deals with transferring data types between computer devices, Applicant respectfully submits that the cited references fail to teach each and every limitation of the present invention, including at least where a back end server of a multi-tier server system maintains all data type information and acts as a single and centralized source from which all middle tier servers can obtain information relating to data types, as recited in combination with the other claim elements.

For example, and as discussed during the interview, Wong (see Fig. 1) describes a method for "peer-to-peer replication of objects" between various nodes connected over a network. In particular, Wong teaches a replication process for replicating user-defined objects to make them available to other nodes. (Col. 1, ll. 7-10). In Wong, users may define classes and generate, store and receive multiple user-defined objects based on each class. (Col. 1, ll. 39-43). If data is shared with other users on a network, a database may be copied from one node onto a new node that does not have a copy of the database. (Col. 2, ll. 53-56). According to Wong, the node on which a user-defined object is located creates a replication group of objects, including any user-defined objects. (Col. 6, ll. 41-56; Col. 8, ll. 25-43). Thereafter, a database server on the node copies data defining the user-defined object to a data structure on a second node. (Col. 9, ll. 25-31). Subsequently, a database server routine replicates the data by first copying the name of the user-defined object to the new node. (Col. 10, ll. 31-35). Data defining the user-defined object is then copied to the new node, and data defining the database object is then copied from the data dictionary. (Col. 10, ll. 40-45, 52-60). A data dictionary is an object that includes, for example, the name of a particular table, the type of each column in the table, and the name of a user-defined object. (Col. 6, ll. 31-41; Col. 7, ll. 44-46). Finally, the new node may instantiate the database object based on data in the data dictionary.

In contrast, and as recited in the claims herein, Applicant's claimed methods and computer program products are directed to deploying one or more data types from a back end

server at a first tier to one or more additional servers at a middle tier in a manner that includes creating or modifying a special table in a database of *the back end server*, the special table including one or more fields for storing data identifying data types and corresponding code for enabling use of each of the data types. Additionally, the back end server acts as *a single and centralized source from which all middle tier servers obtain all data types used by other middle tier servers on the system* and the corresponding code required to enable use of each of the data types.

Applicant's claimed method, as set forth in the independent method and computer program product claims, does not include the distribution of data types created by a user at one node to another node such that data types are replicated peer-to-peer. Wong specifically teaches the transfer of user-defined objects, such that each node can potentially have different objects, depending on the user of the node. As a result, each node disclosed in Wong can have its own, unique user-defined objects and data structures which *each node then replicates on other nodes which are parallel in the system hierarchy*. Thus, multiple sister nodes may replicate their unique user-defined objects to other sister nodes. Applicant's claimed invention, in contrast, transmits all data types from *a single and centralized back end server* which operates at a different tier than the recipient systems. Thus, for at least the foregoing reasons, as well as others discussed during the interview Applicant respectfully submits that Wong fails to disclose or suggest each and every element of the pending claims.

In view of the foregoing, Applicant respectfully submits that the other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicant acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicant reserves the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicant specifically requests that the Examiner provide references supporting the teachings officially noticed, as well as the required motivation or suggestion to combine the relied upon notice with the other art of record.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney by telephone at (801) 533-9800.

Dated this 24th day of January, 2007.

Respectfully submitted,



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